

National Council for Science and the Environment

1707 H Street, N.W. • Suite 200 • Washington, DC 20006
202/530-5810 • Fax 202/628-4311 • schiffries@NCSEonline.org • www.NCSEonline.org

**Testimony of the
NATIONAL COUNCIL FOR SCIENCE AND THE ENVIRONMENT
Craig M. Schiffries, Ph.D., Senior Scientist**

**To the
U.S. HOUSE OF REPRESENTATIVES
Committee on Appropriations
Subcommittee on VA, HUD and Independent Agencies**

**Regarding the
ENVIRONMENTAL PROTECTION AGENCY and
NATIONAL SCIENCE FOUNDATION
FY 2005 Budget Request**

March 25, 2004

Summary

The National Council for Science and the Environment commends the Appropriations Subcommittee on VA, HUD and Independent Agencies for its bipartisan leadership in support of science to improve environmental decisionmaking. We ask you to continue your leadership by appropriating strong and growing funding for environmental research and education to address pressing national challenges.

Environmental Protection Agency. We urge Congress to reject drastic budget cuts proposed for competitive research grants and graduate fellowships administered by the Environmental Protection Agency's (EPA) Science to Achieve Results (STAR) program. The FY 2005 budget request would cut the STAR research grants program by approximately 30 percent, from an estimated \$92 million in the FY 2004 enacted appropriations bill to \$65 million in the FY 2005 budget request. It would also cut the STAR graduate fellowship program by 33.5 percent, from \$9.17 million in the FY 2004 enacted appropriations bill to \$6.1 million in the FY 2005 budget request. As Rep. Vernon Ehlers, Chairman of the House Science Subcommittee on Environment, Technology and Standards, has said, "These proposed reductions should not be allowed to take effect." We ask Congress to provide at least \$100 million for the STAR research grants program and at least \$10 million for the STAR graduate fellowship program.

National Science Foundation. NCSE recommends a 15 percent increase in funding for the National Science Foundation (NSF), bringing the agency's budget to \$6.41 billion in FY 2005. This action is necessary to put the agency on track to double its budget in five years, in accordance with the National Science Foundation Authorization Act of 2002 (Public Law 107-368), which was passed by Congress and signed by the President less than 18 months ago. This legislation recognizes the critical connection between science and the long-term economic strength of the nation. NCSE emphasizes the need for increased funding for NSF's Environmental Research and Education portfolio, especially the priority area on Biocomplexity in the Environment.

National Science Board Report. NCSE encourages Congress to strongly support full and effective implementation of the National Science Board (NSB) report, *Environmental Science and Engineering for the 21st Century: The Role of the National Science Foundation*, within the context of efforts to double the budget of the National Science Foundation.

Federal Investments in Environmental R&D

The National Council for Science and the Environment thanks the House Appropriations Subcommittee on VA, HUD, and Independent Agencies for the opportunity to testify before the panel in support of appropriations for the Environmental Protection Agency and the National Science Foundation.

NCSE is dedicated to improving the scientific basis for environmental decisionmaking. We are supported by over 500 organizations, including universities, scientific societies, government associations, businesses and chambers of commerce, and environmental and other civic organizations. NCSE promotes science and its relationship with decisionmaking but does not take positions on environmental issues themselves.

Federal investments in R&D and science education are essential to the future well-being and prosperity of the nation and deserve the highest priority of Congress. The long-term prosperity of the nation and our quality of life are contingent upon a steady commitment of federal resources to science and technology, and especially environmental R&D.

The Appropriations Subcommittee on VA, HUD and Independent Agencies plays the largest role in setting funding levels for environmental R&D. It has jurisdiction over agencies that account for approximately 45 percent of federal funding for environmental R&D. Federal investments in environmental R&D must keep pace with the growing need to improve the scientific basis for environmental decisionmaking. In recent years, Congress has played a crucial role by supporting strong and growing federal investments in environmental R&D. We appreciate the subcommittee's leadership and encourage its continued support in this difficult fiscal environment.

EPA STAR Programs

Extramural research grants and graduate fellowship programs administered by the U.S. Environmental Protection Agency would be severely cut under the President's budget request for FY 2005. Funding for EPA's Science to Achieve Results (STAR) research grants program would be cut by approximately 30 percent, from an estimated \$92 million in the FY 2004 enacted appropriations bill to \$65 million in the FY 2005 budget request. As a result of these cuts, approximately 93 fewer competitive research grants would be awarded to scientists at universities and nonprofit institutions across the nation, according to EPA's budget justification to Congress. Funding for EPA's STAR graduate fellowship program would be cut by 33.5 percent, from \$9.17 million in the FY 2004 enacted appropriations bill to \$6.1 million in the FY 2005 budget request. The National Council for Science and the Environment urges Congress to restore full funding for EPA's Science to Achieve Results (STAR) research grants and graduate fellowship programs.

Deep budget cuts in EPA's STAR program have been proposed less than one year after the National Academies issued a laudatory report, *The Measure of STAR*, which concludes that the program supports excellent science that is directly relevant to the agency's mission. According to the report, the STAR program has "yielded significant new findings and knowledge critical for regulatory decision making." The report says, "The program has established and maintains a high degree of scientific excellence." It also concludes that the EPA STAR program complements research supported by other agencies and leverages its resources through partnerships, stating "The STAR program funds important research that is not conducted or funded by other agencies. The STAR program has also made commendable efforts to leverage funds through establishment of research partnerships with other agencies and organizations."

The EPA STAR research program compares favorably with programs at other science agencies. According to the National Academies report, "The STAR program has developed a grant-award process that compares favorably with and in some ways exceeds that in place at other agencies that have

extramural research programs, such as the National Science Foundation and the National Institute of Environmental Health Sciences.”

The STAR research grants program expands the scientific expertise available to EPA by awarding competitive grants to universities and independent institutions, to investigate scientific questions of particular relevance to the agency’s mission. The National Academies report says, “the STAR program should continue to be an important part of EPA’s research program.” According to the FY 2005 budget request, funding for the following STAR grants would be cut:

- *Ecosystems Protection* (-\$22.2 million): Approximately 50 STAR grants for research on ecosystem stressors and effects would be eliminated. Research that would be discontinued includes development of indicators for regional estuarine systems, development of genomic water indicators, and research on invasive species’ potential to invade vulnerable ecosystems. According to the agency’s budget documents, “As a result of this reduction, STAR efforts designed to establish or improve the connection between ecosystem stressors and effects, serving as input to decisions at the regional, state, and local levels, will be discontinued.”
- *Pollution Prevention* (-\$5 million): Over 20 research grants would not be funded under the Technology for the Sustainable Environment (TSE) program, which is a collaborative effort with the National Science Foundation.
- *Endocrine Disruptors* (-\$4.9 million): Approximately 18 STAR research grants for research on endocrine disrupting chemicals would be eliminated. According to EPA, grants for research in computational toxicology, and research on mitigating the effects of endocrine disrupting chemicals from concentrated animal feeding operations will not be awarded.
- *Mercury Research* (-\$2 million): The approximately 5 STAR grants that support mercury research would be eliminated. The research supported by those grants would support understanding of the fate of atmospheric mercury.
- *Hazardous Substance Research Centers* (-\$2.3 million): A five-year program that awarded grants for hazardous substance research would not be funded in FY 2005. According to EPA, some multi-year grants would not be funded in their final year due to this cut.
- *Homeland Security Building Decontamination Research* (-\$8.3 million): Research on building decontamination for homeland security would be completely eliminated.
- *Environmental Technology Verification* (-\$1.0 million): One or two centers for testing the effectiveness of commercial environmental technologies would be closed.

The STAR graduate fellowship program is the only federal program aimed specifically at students pursuing advanced degrees in environmental sciences. According to the National Academies report, “The STAR fellowship program is a valuable mechanism for enabling a continuing supply of graduate students in environmental sciences and engineering to help build a stronger scientific foundation for the nation’s environmental research and management efforts.” The STAR fellowship program is highly competitive, with only 7 percent of applicants being awarded fellowships.

The President’s budget request proposed even deeper cuts in the STAR graduate fellowship program in the past two years. The budget request would have cut funding for the STAR graduate fellowship program by 50 percent in FY 2004 and by 100 percent in FY 2003. Under the leadership of the subcommittee, Congress restored full funding for the EPA STAR graduate fellowship program in both years. NCSE encourages Congress to restore full funding for the program again in FY 2005.

Rep. Vernon Ehlers, Chairman of the House Science Subcommittee on Environment, Technology and Standards, convened a hearing on March 11, 2004 that examined the proposed cuts in EPA’s STAR programs. At the conclusion of the hearing, he said, “I have not heard a convincing reason today for why the STAR program was cut so dramatically. By all accounts, it is a well-run, competitive, peer reviewed

program that produces high quality research. These proposed reductions should not be allowed to take effect.”

In FY 2005, NCSE urges Congress to appropriate at least \$100 million for the EPA STAR research program, which is the funding level proposed in the President’s budget request for FY 2004. NCSE urges Congress to appropriate at least \$10 million for the STAR graduate fellowship program.

Science, Technology and Education at EPA. EPA’s overall Science and Technology account faces serious reductions in the President’s FY 2005 budget request. This account would be cut by 11.8 percent to \$689.2 million in FY 2005. We encourage Congress to provide at least \$790 million to fund this important function at EPA.

The FY 2005 budget request proposes no funding for the EPA Office of Environmental Education. NCSE strongly encourages Congress to restore full funding of at least \$10 million to support the congressionally mandated programs administered by this office. These programs provide national leadership for environmental education at the local, state, national and international levels, encourage careers related to the environment, and leverage non-federal investment in environmental education and training programs.

National Science Foundation

Implementing the NSF Doubling Act. The National Council for Science and the Environment urges Congress to appropriate the funds necessary to implement the National Science Foundation Authorization Act of 2002, which was passed by Congress on November 15, 2002 and signed into law by the President on December 19, 2002 (Public Law 107-368). A central goal of the Act is to double the budget of the National Science Foundation in five years. It authorizes a budget increase of 105 percent for the NSF, from \$4.8 billion in FY 2002 to \$9.8 billion in FY 2007. The NSF Authorization Act of 2002 is a major milestone for the NSF, the scientific community, and the nation. In order to achieve the outcomes envisioned by this bold legislation, Congress must appropriate the funding levels specified in the NSF Authorization Act.

The National Council for Science and the Environment urges Congress to appropriate \$6.41 billion for the National Science Foundation in FY 2005, which would be a 15 percent increase over FY 2004. NCSE supports an increase of 15 percent in FY 2005 in order to place NSF on the doubling track that Congress deemed necessary. Although the authorized funding level is \$7.38 billion for FY 2005, we understand that this may be beyond reach in the current fiscal environment.

The President’s budget request would increase funding for NSF by 3.0 percent to \$5.75 billion in FY 2005. Of the \$167 million in new funding, 45 percent would be devoted to a management initiative that would provide more staff for NSF and improve the security of its computer systems. Under the FY 2005 budget request, funding for most of the disciplinary directorates, such as Biological Sciences and Geosciences, would increase by only 2.2 percent, only slightly more than the expected rate of inflation.

Expanding NSF’s Environmental Research and Education Portfolio. The National Science Foundation plays a crucial role in supporting environmental R&D. Environmental research often requires knowledge and discoveries that reach across disciplinary and institutional boundaries. The NSF recognizes this and encourages multidisciplinary interactions within directorates and among directorates and programs, as well as with other federal agencies. The NSF has established a “virtual directorate” for Environmental Research and Education. Through this virtual directorate, NSF coordinates the environmental research and education activities supported by all the directorates and programs. In order to achieve the \$1.6

billion funding level recommended by the National Science Board (see below), NCSE supports rapid growth in NSF's Environmental Research and Education portfolio over the next several years.

NCSE is especially supportive of NSF's priority area on Biocomplexity in the Environment. This initiative provides a focal point for investigators from different disciplines to work together to understand complex environmental systems, including the roles of humans in shaping these systems. After several years of rapid growth, the FY 2005 budget request would provide flat funding of \$99.8 million for Biocomplexity in the Environment. This priority area includes research in microbial genome sequencing and ecology of infectious diseases—to help develop strategies to assess and manage the risks of infectious diseases, invasive species, and biological weapons crucial to homeland security. We urge Congress to support this critical initiative and to consider funding it at a level of \$136 million, as proposed in FY 2000 budget request for NSF.

National Science Board Report on Environmental Science and Engineering

The National Council for Science and the Environment encourages Congress to support full and effective implementation of the 2000 National Science Board (NSB) report, *Environmental Science and Engineering for the 21st Century: The Role of the National Science Foundation*, within the context of a doubling of the budget for the NSF.

The National Science Board report sets out an ambitious set of recommendations that could dramatically improve the scientific basis for environmental decisionmaking. The first keystone recommendation is as follows:

“Environmental research, education, and scientific assessment should be one of NSF's highest priorities. The current environmental portfolio represents an expenditure of approximately \$600 million per year. In view of the overwhelming importance of, and exciting opportunities for, progress in the environmental arena, and because existing resources are fully and appropriately utilized, new funding will be required. We recommend that support for environmental research, education, and scientific assessment at NSF be increased by an additional \$1 billion, phased in over the next 5 years, to reach an annual expenditure of approximately \$1.6 billion.”

The National Science Foundation has taken many steps to implement the recommendations of the NSB. Full implementation of the NSB report will require strong support from Congress and a significant increase in funding for NSF's portfolio of environmental science, engineering and education.

The National Council for Science and the Environment appreciates the Subcommittee's sustained support for environmental research at the Environmental Protection Agency and the National Science Foundation. Investments in these agencies continue to pay enormous dividends to the nation. Thank you very much for your interest in improving the scientific basis for environmental decisionmaking.

Biographical Sketch of Witness

Dr. Craig M. Schiffries is Director of Science Policy and Senior Scientist at the National Council for Science and the Environment. He previously served as a Congressional Science Fellow on the staff of the United States Senate Judiciary Committee; Director of Government Affairs for the American Geological Institute; Director of the Board on Earth Sciences and Resources of the National Academy of Sciences / National Research Council; visiting faculty member at Yale University; and consultant with Monitor Company. Dr. Schiffries simultaneously earned his B.S. and M.S. degrees from Yale University, where he was elected to *Phi Beta Kappa*, graduated *summa cum laude*, and double-majored in Geology and Geophysics and in Economics and Political Science. He was a Marshall Scholar at Oxford University, where he earned an honors B.A. in Philosophy, Politics, and Economics. He received a Ph.D. in Geology from Harvard University, where he held a fellowship from the Hertz Foundation.